

THE CULTURE TECHNOLOGY OF MAIZE ON PROTECTIVE NORMS IMPOSED BY THE EU ON SANDY SOILS

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ABSTRACT

Among the main cultures, very important is the maize culture which is compared to 'cultures that have golden beans'. Maize is considered nowadays one of the most important cultivated plants for the agriculture of our country, as well as on a global scale because of the significant area that maize holds as well as high productions/hectare that are obtained. Because of its high capacity of adaptation to soil and climate conditions as well as because of the ample improvement process, maize culture has a spreading area that guarantees the satisfaction of all requirements of every county in our country, and, in many counties mainly the southern and the western ones – may accomplish important availability in the case of our national economy. (Anderson F.N and Peterson G.A., 1973)

The present work tries to establish the role of irrigation, non irrigation and applying variable doses of chemical fertilizers, it also tries to ground, from the physiological point of view, the contribution of each factor in achieving high quantitative and qualitative productions, mececanice works well on sandy soils.(Sărăcin Ion., 1999)

INTRODUCTION

The paper presents the tillage and soil management operations for the preparation of the sands soils from Opopoara, Olt County, in order to alleviate the soil erosion, reminisce of several pesticides for a healthy crop complying with the UE norms. (Pandia Olimpia, 2006)

In approach of theme selected we starting on the premise the ecological agriculture is a system of management intelligent of agriculture production promotion and strengthen the health of agrosistem take in consideration biodiversity, biological cycles and the biological activity of sandy soils for the obtain of agricultural and ecological produces on sandy soils in the left part of the river Olt, the technique and technologies used it must to be perfected doing reference at the minim working system. the theme propose require an interdisciplinary action with the participation a lot of specialists are propose in keeping with the European rules to auctioned for reducing the pollution and conservation tillage, through reduction of action agricultural unit on sandy soils, the critical analysis of quality produce agricultural obtain on sandy soils on the left of Olt keeping with the use demand. (Hera, C., Ghinea, L., Eliade, GH., 1977; and Sima E., 2002)

The established of coordinate to efficiently the agricultural technology in competition context for conserving the sandy soils, the improved the agricultural quality produces through agrochemical control of soils , plants and water. (Davidescu., et al. 1976, and Hera C., 1972)

It follow the determination of contents to chemical elementremaning and the influence of those on the quality agricultural produces, and established connection in the crop technology witch respect the use demand for chemical fertilizers herbicides and pesticides it following the contribution of research at our specialists for the used conservation tillage in the joint modern and ecological agriculture. (Goian, M., Sala F., Adina Berbecea, Isidora Radulov, Gherban C., 2000)

MATERIAL AND METHOD

The soil, as a component of the ecosystem, represents a biological opened system which is full of life. Because of the important resources, the soil permanently interacts to human activities and applied technology.

Factor **A**: destruction of the existing herbage, approximate 85% on the sowed area

Factor **B**: using a minimum farming system

1 – Sowed, using U-445+CPU

2 – Preparing the germinal bed, CPCG+U650

3 – Sowing, SPC 8+EF is used

Factor **C**: the sowed plant

1 - Olt maize

RESULTS AND DEBATES

For the identification of the properties or the key attributes of the soil, sensible to exchange the function of the soil will be recommended the research of a minimum set of indicators, of primordial interest for the farmer.

Indicators selected for evaluation of the management of soil quality must show which are the present performances of the soil and how can be preserved and improved their functions for future usage. The selected indicators can refer to physical, chemical, biological characteristics or at processes that took place at the level of the soil.

Table 1

Chemical properties of the argic chernosiomus from the Oporela Olt County

Genetics horizon	Depth (cm)	Valour Ph (H ₂ O)	S.B. m.e/100g	S.H. m.e	Humus %	N prop. %	P p.p.m.	K p.p.m.
Ap1	0-25	6,03	22,45	3,34	3,79	0,245	23,6	169,7
Ap1	0-25	6,00	22,44	3,31	3,77	0,244	23,5	169,5
Ap1	0-25	6,02	22,42	3,30	3,78	1,441	23,2	169,2
Ap1	0-25	6,01	22,45	3,33	3,78	0,441	23,4	169,4
Ap2	25-34	6,18	28,74	2,64	28,19	0,434	27,7	173,8
Ap2	25-34	6,15	28,71	2,61	28,17	0,432	27,5	173,7
Ap2	25-34	6,17	28,73	2,64	28,19	0,432	27,2	173,5
Ap2	25-34	6,18	28,70	2,63	28,16	0,431	27,4	173,4

Buctril™ Universal was used. It has, as an active substance, the following: bromoxynil 280g/l + 2,4D (as esters) 280g/l, third group of toxicity. Thus, the following were combated: Xantium spp., Cirsium arverse, Cynodon dactylon, Digitaria sanguinalis, Galium aparine.

The recommended dose is of 0.8l/ha when the field is full of herbage because it penetrates the soil in less than an hour and the effects are visible from the beginning.

The field is 85% infested with mono/dicotyledonous herbage. As an effect of using the respective herbicides, the existing herbage were 97% destroyed.



Picture 1. Mono/dicotyledonous at dicotyledonous herbages before treating the soil

In the same time, the soil represents the main source of herbs in the cultures, due to the reserve of herbs seeds from the soil, reserve that can be used for the realization of the green areas, of protection of the cultures through Aeolian deflation, by application of some specific technologies in that area and leaving some unprocessed surfaces in which high herbs will be developed up to the blossom period, when will be destroyed.



Picture 2. Sandy soil prepared for sowing

Certified and Gaucho 600 FS treated seed, having as an active substance imidaclopyrid 600g/l – concentrated suspension - , was used for sowing.

After sowing, the product forms a protection halo around the seeds and it operates directly against the pests in the soil. Gaucho penetrates the bean and, from here, the plant and it acts, by ingestion, on the pests which attack the plants in the first vegetation period.

Thanks to insecticides used during the experiment, the results were of 98% and the estimated production/ha were also obtained.

The degradation of the soil through the reduction of the content of organic substance has as main factors that can be identified: excessive use of the agricultural works or of others measures of agro-techniques measures, accelerated erosion of the soil, due to long periods of activity of the wind in this area, excessive and inadequate application of other measures of agro

techniques, the accelerated erosion of the soil due to long periods of activity of the wind in this area, excessive and inadequate application of chemical fertilisers, herbicides and insecticides.

The determination of the total reserve of seeds of grass in the soil on the layer of 0-10 cm, was realized taking into account the application of the basic works of the soil in the classical system and in the minimal system of works. The results obtained after the determination realized show that the reserve of seeds of grass from the soil is influenced by the system of applied works.



Picture 3. Sowing maize Olt

After the field was prepared, it was sowed. Olt was used, which, at the beginning had a good springing, but, because the sandy soil was not irrigated, the plants seared, the corn cobs were small, the beans were stunted, the rows were incomplete, although the soil acted well during the farming.



Picture 4. Corn found in vegetation on soil studied

Work of improvement and preservation of the soils must be advisable realised. It is imposed that a part of these fields, with reduced fertility capacity be passed in the forester field and to facilitate the foundation of protection curtains.

From the agro technical point of view, grasses that will be developed on these soils can be used the foundation of green areas for the protection of the cultures. The results of the researches offer a support the possibility of promotion of new - village technology, with an efficient management.

CONCLUSIONS

- In order to obtain a better production, irrigating the crop is necessary.
- It is imperative that insecticides be used for treating maize beans against different kinds of corn diseases.
- Using herbicide for fighting pest control which have active substance accepted by EU.
- Farming the soil must be performed in order to maintain it.

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